EFFECTIVENESS OF COMPREHENSIVE NURSING INTERVENTION ON ANXIETY, FATIGUE, QUALITY OF LIFE AMONG POSTOPERATIVE PATIENTS WITH ORAL CANCER IN SELECTED HOSPITAL, TRIPURA

Synopsis

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This is to certify that the synopsis entitled **"Effectiveness of Comprehensive Nursing Intervention On Anxiety, Fatigue, Quality Of Life Among Postoperative Patients With Oral Cancer In Selected Hospital, Tripura"** has been verified by me for the presentation.

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DECLARATION

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TABLE OF CONTENTS

SL.NO.	CONTENTS	PAGE NO.
a)	Introduction	1-3
b)	Research problem	3
c)	Literature Review	3-7
d)	Gaps in Research	7-8
e)	Needs of the study	8
f)	Objectives	8-9
g)	Delimitation of the study	9-10
i)	Research questions	10
j)	Research Hypothesis	11
k)	Research Design	11-18
	1.Research Methodology	11-12
	2.Area of study	12
	3.Sample	12
	4.Techniques	12
	5.Tools	12-13
	6.Measurement and Scaling	13
	7. Data Processing	13-14
	8.Analysis and interpretation	14
	9.Testing Hypothesis	15
	10. Expected Outcomes	15
	11. Relevance of Expected Results	15
	12. Timelines	16
	13. Tentative Chapter Plan	16
	14. References/ Bibliography	17-18

BACKGROUND OF THE STUDY

a) Introduction

Oral cancer is formed from any part of the mouth or throat. It belongs to a larger group of cancers called head and neck cancers or oral cavity cancer. Oral cancer mostly develops in the squamous cells which are found in the mouth, tongue, and lips. The most recent incidence of oropharyngeal cancers and oral cavity cancers in the United States in 2022 was found to be about 54,000 new cases of oropharyngeal cancer or oral cavity cancer and about 11,230 mortality from oropharyngeal cancer or oral cavity cancer occurring most often in people with 63 years old. After confirmation of diagnosis with oral cancers, it can spread to the lymph nodes of the neck. Early detection is key to surviving oral cancer.[1]

Globally oral cancer is the sixth most common cancer, with the highest incidence in South Asia or South East Asia. India is contributing to almost one-third of the total burden of disease and second country who have the highest number of oral cancer cases. According to ICMR, there will be a 12 percent rise in cancer cases in India in the next five years. The most common form of cancer cases in India is breast cancer, cervical cancer, and oral cancer. Alcohol consumption and tobacco use are the most common etiologic factors, although HPV has been recently implicated in oral cancer. Surgery is the most well-established mode of initial definitive treatment for a majority of oral cancers.[2]

Anxiety and depression can cause life-threatening illnesses by interfering with the power to adapt to the strain. As an example, the length of hospitalization, treatment remedies, quality of life, and survival time are all compromised as a result of such problems for patients with cancer.[3]

Fatigue, usually described as feeling tired, weak, or exhausted, affects the

majority of people during cancer treatment. Side effects such as cancer fatigue can result from the treatment or from cancer itself. Cancer fatigue may cause a decreased production of red blood cells which invades bone marrow causes fatigue. Even chemotherapy, radiation therapy, surgery, and immunotherapy may all cause fatigue.

Patients expecting surgery face an uncertain and vulnerable period stuffed with concern and anxiety, which is particularly true for cancer patients. The diagnosis followed by treatments is highly stressful, with very little time to accept the cancer diagnosis before having to consider treatment options and dealing with the physical impact of the selected treatment. This rapid sequence of events of an individual's sense of control can diminish and may cause feelings of powerlessness and helplessness, which might disorganize social processes, daily functioning, and psychological wellbeing, producing an adverse effect on the quality of life.[4]

At a subsequent time, receiving adequate information may result in increased involvement in informed deciding, greater satisfaction with treatment choices, during diagnosis improved coping skills, treatment, and post-treatment stages, increased perceptions of control, increased hope with empowerment, reduced anxiety and fear and distress, improved communication with health care professionals and better relationship with family members and better physical status and recovery. These positive results emphasize the importance of providing enough information attuned to the informational requirements of patients with cancer. The desire for information about diagnosis, prognosis, and treatment is particularly great amongst patients with cancer and a priority in all groups of cancer, as has been found within the literature. Patients with cancer also showed a need for adequate information in comparison to other patients. On the other hand healthcare professionals, tend to underestimate their patient's informational needs and therefore failed to individualize the information they provide. To the significance of receiving sufficient information and the influence of this information on these patients'

well-being and satisfaction, improvements need to be made in patient education.[4]

Preoperative teaching, which is, an interactive step of providing patients sufficient information and explanations about the importance of surgical procedures, postoperative recovery processes, and psychosocial support, is beneficial to patients in reducing anxiety, duration of hospital stay, physiological complications after the operation, upgrading knowledge and encouraging self-care management, faithfulness, tolerance, and postoperative recovery, etc.[5]

The comprehensive nursing intervention aims to treat the affective, cognitive, behavioral, and socio-cultural dimensions and promote the health of the patient. Comprehensive nursing intervention for oral cancer patients can help to relieve anxiety, fatigue after the operation and psychological pressure of patients in the short and long term and improve the quality the life of the postoperative patients.

b) Research Problem

Effectiveness of Comprehensive Nursing Intervention on Anxiety, Fatigue, Quality Of Life among Postoperative Patients With Oral Cancer In Selected Hospital, Tripura.

c) Review Of Literature

I. Review of literature related to incidence rate among Postoperative Patients With Oral Cancer.
II. Review of literature related to anxiety, fatigue, and quality of life among Postoperative Patients with Oral Cancer.
III. Review of literature related to comprehensive nursing intervention among Postoperative Patients with Oral Cancer.

I. Review of literature related to incidence rate among Postoperative Patients With Oral Cancer.

In 2019 a retrospective study was conducted by Sajith Babu Thavarool et al. at a tertiary care cancer centre in rural Kerala, India on "Improved survival among oral cancer patients' among two hundred and twenty oral cancer patients undergoing surgery from June 2009 to June 2013. The results show that (136 males); 85% were overwhelming tobacco, principally in cuttable kind. The bulk (51.1%) had tongue cancer, of which 75 patients (34.1%) had T4 tumors. Surgical irradiation was given to 108 patients (49.1%). 40 had repetition, of that 23 were in the early stage. Of these, 19 showed node quality ($p < 0.01$). Node-negative patients had 79% 5-year survival whereas node-positive had 59 which are like that rumored in developed countries. The median disease-free survival period was 48.2 months. The study concludes that node quality is the single issue moving repetition and survival. The general survival and disease-free survival are healthier in patients while no lymphatic tissue involvement and in patients with early stages of cancer as compared to the patients with node involvement and in advanced stages.[6]

II. Review of literature related to anxiety, fatigue, and quality of life among Postoperative Patients with Oral Cancer.

In 2018 a study was conducted by Endang S et al. in the Department of Surgical Oncology of Hasan Sadikin Hospital situated in Bandung city of Indonesia on "Assessment of oral cancer pain, anxiety, and quality of life of oral squamous cell carcinoma patients with invasive treatment procedure" to evaluate the pain of preoperative and postoperative oral cancer, anxiety, and quality of life of OSCC cases with the invasive treatment procedure. A preoperative and interview was conducted in 21 (10 males;

11 females) cases who had been diagnosed with stage 3 and stage 4 OSCC and were about to go through surgery by using the HADS (Hospital Anxiety and Depression Scale), EORTC QOL -C30 (European Organization for Research and Treatment of Cancer Quality of Life Questionnaire), OES (shortened EORTC QOL Questionnaire for Oesophageal Cancer 18), VAS (visual analog scale), and UCSF (University of California San Francisco Oral Cancer Pain Questionnaire). The present study reveals a significant decrease in postoperative oral pain ($p < 0.01$) and anxiety level ($p < 0.01$), whereas the postoperative patient' quality of life was significantly ($p < 0.01$) increased. The study concludes that despite the invasive procedure that might beget postoperative effects, OSCC cases in the current study showed a better quality of life after cancer removal.[7]

In 2013 a quantitative analysis based study was conducted by Koizumi A et al. at Yeddo Medical and Dental University entitled "Changes within the Psychological Characteristics of Patients with Oral Cancer within the Perioperative Period" to evaluate the changes in severe psychological stress and quality of life (QOL) during the perioperative time in patients with oral cancer undergoing surgery and investigated the connection between patient's QOL and severe psychological stress. Fifty patients participated. The Hospital Anxiety and Depression Scale (HADS; Japanese version), as a psychological, take look at and therefore the practical Assessment of Cancer medical care General (FACT-G); and Head and Neck (FACT-H&N), as quality of life (QOL) surveys were administered preoperatively, once surgery, and one month once exploit the hospital. The study result shows that anxiety was highest pre-operation and depression was highest post-operation, however, enhancements in each were seen post-discharge. At the post-operation time purpose, anxiety and depression low-score teams had considerably high scores on all QOL subscales. The study concludes that providing psychological support whereas considering anxiety can

be significantly helpful preoperatively whereas providing psychological support whereas considering depression can be significantly helpful postoperatively.[8]

III. Review of literature related to comprehensive nursing intervention among Postoperative Patients With Oral Cancer

In 2019 An overview of systematic reviews was conducted by Tuominen L, Stolt M, Meretoja R, Leino-Kilpi H et. al. entitled "Effectiveness of nursing interventions among patients with cancer" to enhance the quality of care and deliver the best evidence for doctors to refer to while developing productive nursing interventions. Online databases such as PubMed, CINAHL, MEDLINE, and Scopus were searched. A total of 9 reviews reporting findings from 112 original studies published in the year 2007-2017, met the selection criteria. Intervention effectiveness results were analysed using descriptive quantification with a narrative summary of the quantitative data. The results show the effectiveness of educational nursing interventions was not consistent on quality of life (QoL), anxiety, attitudes, and distress, whereas it was positive on level of knowledge, sleep, symptom severity, and uncertainty. Psychosocial nursing interventions played an important role in spiritual well-being, meaning of life, fatigue, and sleep and reduced cancer-related fatigue. Nursing interventions supporting patients' coping had an important effect on anxiety, distress, fatigue, sleep, dyspnoea, and functional ability. Interventions related to activity may prevent cancer-related fatigue. The study concludes that Nursing interventions achieved significant physical and psychological effects on the lives of patients with cancer. The multidimensional nature of interventions by merging several elements reinforces the effect. Future research priorities include the identification of the most beneficial components of these interventions.[9]

In 2021 A Pilot Randomized Controlled Trial study was conducted by Garima Khantwal et. al. entitled **"**Effect of Postsurgical Nurse-led Follow-ups on Quality of Life in Head-and-Neck Cancer Patients" among 64 numbers of head-and-neck cancer

patients; who were electively planned for surgery and these patients were randomized in the experimental group (n_1 =32) and control group (n_2 =32). The result shows a significant improvement in global health in the experimental group (P = 0.02), role functioning (P = 0.02), emotional functioning (P = 0.01), swallowing (P = 0.01), and opening mouth (P = 0.02). Speech problems and postoperative pain were the most distressing symptoms in both groups. The study concludes that the nurse-led postsurgical virtual education program was found effective to improve the selected domains of QOL and may be used as an adjuvant intervention for patients with head-and-neck cancer.[10]

In 2019 A Randomized Controlled Trial study was conducted by Hsiang CC, Chen AW, Chen CH, Chen MK et. al. entitled "Early Postoperative Oral Exercise Improves Swallowing Function Among Patients With Oral Cavity Cancer" to evaluate the effect of oral exercise in addition to standard general care and diet counseling on the physiology of swallowing among fifty patients (25 in each group) with oral and oropharyngeal cancer. The study includes patients who underwent tumor resection, neck dissection, and reconstruction. The Rosenbek penetration-aspiration scale along with a modified barium swallow study was followed and administered at 1 and 4 months postoperatively. The study findings show that significant improvements in the intervention group were found regarding the penetration-aspiration scale (P = .037), and oral and pharyngeal residue with thickened boluses (Nectar P < .001, Honey P < .001, and Pudding P < .001). The study concludes that oral exercise significantly improves the postoperative swallowing function of patients with oral cavity cancers.[11]

d) Gaps in research

Patients who have received head and neck cancer (HNC) treatment have a high risk for loss of function such as speaking, eating, swallowing, and therapy-associated side effects. Anxiety, depression, and fatigue are frequent psychological, physiological

symptoms and syndromes, particularly among HNC patients. Accumulating literature has shown that education can greatly reduce the anxiety and depression of cancer patients after surgery or undergoing chemotherapies. Therefore, this study designed a comprehensive nursing intervention that included a performance of swallowing exercise, mouth opening exercise by research personnel, educational intervention on the use of thyme honey, dental care, and counseling among postoperative patients with oral cancer.[12]

e) Need for the study

There is hardly any research data based on anxiety, fatigue, and quality of life among postoperative patients with oral cancer from the studied population. The outcome of the study will provide a better understanding of individual differences regarding information provision and subsequent health outcomes and on possible means to realize the improvements within present increasingly demanding health care environments. Finally, the use of comprehensive nursing education will be helpful as a means of improving information provision in current healthcare settings.

f) Objectives:

1. To assess the pretest level of anxiety, fatigue, and quality of life among postoperative patients with oral cancer in the experimental and control group.
2. To assess the post-test level of anxiety, fatigue, and quality of life among postoperative patients with oral cancer in the experimental and control group.
3. To find the correlation between the level of anxiety and fatigue among postoperative patients with oral cancer in the experimental and control group.

4. To find the correlation between fatigue and quality of life among postoperative patients with oral cancer in the experimental and control group.
5. To find the correlation between the quality of life and level of anxiety among postoperative patients with oral cancer in the experimental and control group.
6. To compare the pretest and post-test level of anxiety and fatigue, pretest and post-test level of fatigue and quality of life, pretest and post-test level of quality of life and anxiety among postoperative patients with oral cancer in the experimental and control group
7. To find out the association of pretest level of anxiety, fatigue, and quality of life among postoperative patients with oral cancer with their selected demographic variables.

g) Scope:

Inclusion Criteria:

The study includes:

1. Postoperative patients with oral cancer.
2. Postoperative patients with any stage of oral cancer.
3. All available postoperative patients in the ward.
4. Both male and female patients between 18-70 years of age group.
5. Patients who can read and write Bengali or English.
6. Duration of comprehensive nursing intervention for first the 2 consecutive days (Day 1, Day 2).

Exclusion Criteria:

The study excludes:

1. Patients who are not willing to participate in the study.
2. Patients below 18 years of age.
3. Hemodynamically unstable patients.

4. Postoperative patients with other cancer rather than oral cancers.
5. Postoperative patients in ICU.

h) Delimitation of the study:

1. The study is delimited to the postoperative patients with oral cancer in selected hospital, in Tripura.
2. Those patients who are willing to participate.
3. Those patients who are available at the time of data collection.
4. The data collection period is a minimum of 3 years.

i) Research questions:

The study has been designed to investigate:

1. Is there any significant difference between mean pre-test and post-test levels of anxiety, fatigue, and quality of life in postoperative patients with oral cancer in the experimental and control group?

2. Is there any significant association between the pre-test level of anxiety, fatigue, and quality of life in postoperative patients with oral cancer with their demographic variables?

j) Research Hypothesis:

- **H_1**: There will be a significant difference between mean pre-test and post-test levels of anxiety, fatigue, and quality of life among postoperative patients with oral cancer in the experimental and control group.
- **H_2**: There will be a significant correlation between mean pre-test and post-test levels of anxiety, fatigue, and quality of life among postoperative patients with oral cancer in the experimental and control group.
- **H_3**: There will be a significant association between the pre-test level of anxiety, fatigue, and quality of life among postoperative patients with oral cancer with their demographic variables.
- **H_0**: There will be no significant difference between mean pre-test and post-test levels of anxiety, fatigue, and quality of life among postoperative patients with oral cancer in the experimental and control group.

k) Research Design:

1. Research Methodology:

Randomized control design

GROUP	PRE TEST	INTERVENTION	POST-TEST
Experimental group	O1	X*	O2
Control group	O1	*	O2

R=Randomization.

O1=Pre test.

O2= Post

X=Comprehensive nursing intervention.

*= Hospital routine treatment

2. **Area of study:**

The study will be conducted in selected cancer hospitals, Agartala, Tripura.

3. **Sample:**

The sample consists of all postoperative patients with oral cancer who will fulfil the sampling criteria in the selected hospital. A sample of a minimum of 300 oral cancer surgery patients will be randomly selected. In each group, 150 patients will be allotted.

4. **Technique:**

The probability method of simple random sampling technique will be used with the lottery method.

5. **Tools :**

Section A:

Background demographic variables such as age, sex, religion, education, occupation, family income, marital status, type of surgery, and duration of stay in hospital.

Section B:

Beck Anxiety Inventory Scale to assess the level of anxiety.

SCORE	LEVEL OF ANXIETY
0-21	Low anxiety
22-35	Moderate anxiety
36 and above	Potentially concerning the level of anxiety

Section C:

Multidimensional fatigue inventory scale to assess the level of fatigue.

Section D:

EORTC (European Organization for the Research and Treatment of Cancer) scale to assess the quality of life.

6. Measurement and scaling:

Measurement: Ordinal Measurement Scale

Scaling: Likert scale

7. Data Processing:

The researcher will obtain permission from the authority of the selected hospital and informed consent from the sample. The data collection consists of the following three phases:

Phase I:

After getting permission from the authority, the pre-test will be conducted to assess the level of anxiety using Beck Anxiety Inventory Scale, Multidimensional fatigue inventory Scale to assess the level of fatigue, and EORTC to assess the quality of life in both groups.

Phase II:

The intervention will be administered to the experimental group by the researcher on the same day. The interventions include the performance of swallowing exercises, mouth opening exercises by research personnel, educational intervention on the use of thyme honey, dental care, and counselling among postoperative patients with oral cancer. The exercise will be administered for 10-15 minutes and 30 minutes for nursing intervention. These exercises will be followed 9-10 times a day for 2 consecutive days and educational intervention practiced by the patient at the necessary time. The control group will be asked to follow the hospital's routine treatment.

Phase III:

The post-test will be conducted to assess the lev el of anxiety using Beck Anxiety Inventory Scale, Multidimensional fatigue inventory Scale to assess the level of fatigue, and EORTC to assess the quality of life in both experimental and control groups.

8. **Analysis and estimation:** The data collected will be analyzed through descriptive and inferential statistics.

Descriptive statistics

1. Frequency and percentage distribution will be used to describe demographic characteristics of postoperative patients with oral cancer surgery in both experimental and control groups.
2. Range means and standard deviation will be used to assess the pre-test and post-test levels of anxiety, fatigue, and quality of life in postoperative patients with oral cancer in both experimental and control groups.

Inferential Statistics

3. Karl Pearson's Correlation will be used to test anxiety, fatigue, and quality of life among postoperative patients with oral cancer in both experimental and control groups.
4. Wilcoxon's test will be used to compare the pre-test and post-test levels of anxiety, fatigue, and quality of life in postoperative patients with oral cancer in both experimental and control groups.
5. Mann –Whitney U-test will be used to compare the post-test level of anxiety, fatigue, and quality of life of postoperative patients with oral cancer in both experimental and control groups.
6. Chi-Square test will be used to test the association between level of anxiety, fatigue, and quality of life in postoperative patients with oral cancer with their selected demographic variables.

9. Testing of hypothesis:

Statistical analysis will be performed with the following test procedures.

- Wilcoxon's test
- Mann –Whitney U-test
- Chi-Square test

10. Expected outcomes:

a) Nursing Education: The present study will give evidence regarding the management of the level of anxiety, fatigue, and quality of life by using the comprehensive nursing intervention. Continuing educational programs will be conducted among postoperative patients with oral cancer to identify the need for cost-effective management of anxiety, fatigue, and quality of life by using the evidence-based practice of application.

b) Nursing Administration: The nurse administrator will be able to formulate policies, protocols, guidelines of care in collaboration with the multidisciplinary team which will help students and health workers to gain excellent knowledge in the management of the level of anxiety, fatigue, and quality of life among cancer patients undergoing oral surgery.

c) Nursing Research: The findings of the study will serve as the basis for professionals and students to conduct further studies.

11. Relevance of Expected Results:

Intervention research is important for providing the evidence basis for nursing practice. The generalization of the study results can be made by replication of the study. To the best of my knowledge, no research has been done before on this topic. The findings of the study will be helpful to determine the role of nurses in promoting the health of patients who have undergone oral cancer surgery. This study will support and enhance the life situation of both patients and their families and the dissemination of

findings through the internet and professional journals will make the application of research findings to be effective.

12. Timelines: A period of minimum of 3 years.

13. Tentative Chapter plan:

- Chapter 1: Introduction
- Chapter 2: Objectives
- Chapter 3: Review of literature
- Chapter 4: Research Methodology
- Chapter 5: Results
- Chapter 6: Discussion
- Chapter 7: Conclusion
- Chapter8:References

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